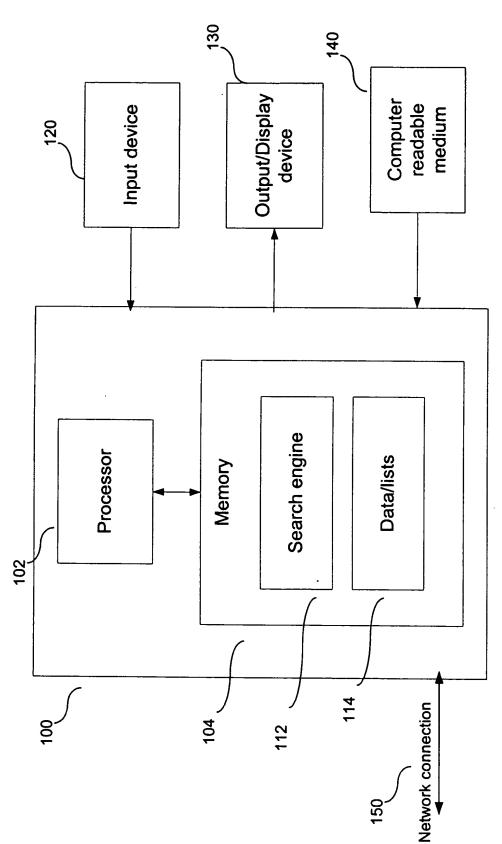
Application No. 09/418,418
Title: METHOD FOR RANKING HYPERTEXT SEARCH BY ANALYSIS OF HYPERLINKS FROM EXPERT

DOCUMENTS AND KEYBOARD SCOPE
Inventors: Krishna A. Bharat et al.
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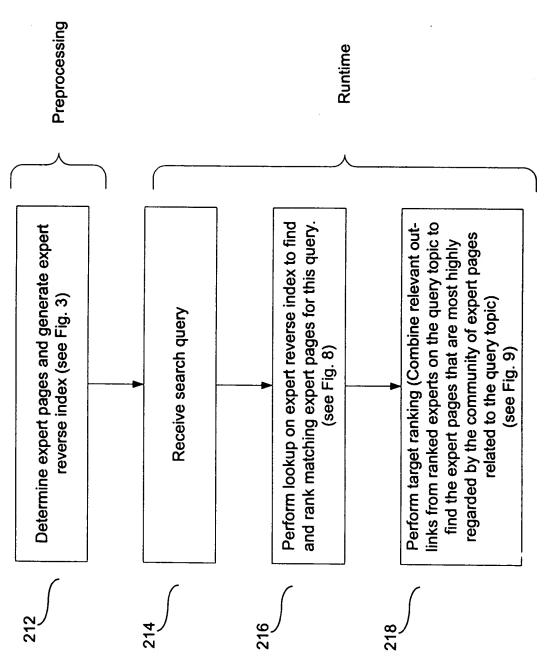
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about all

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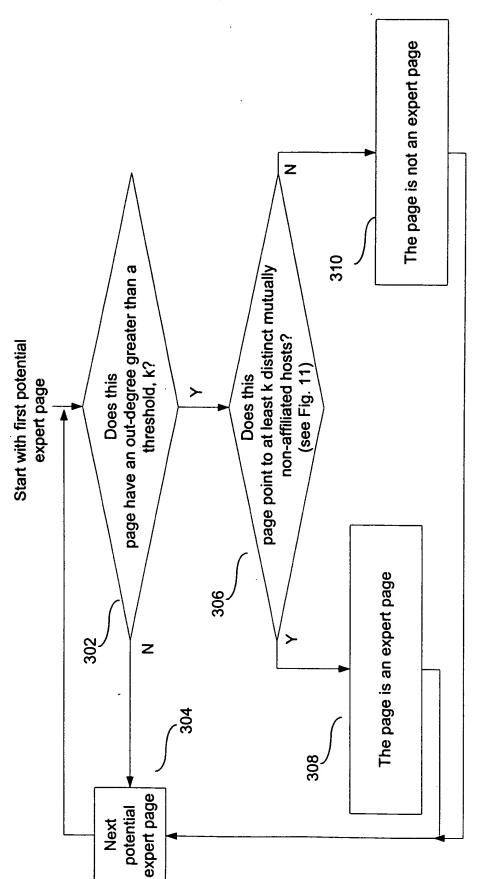


Responding to a Search Query Fig. 2(b)

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Determining Expert Pages Fig. 3(a)

ANALYSIS OF HYPERLINGS FROM EXPERT DOCUMENTS AND KEYBOARD SCOPE Inventors: Krishna A. Bharat et al. Atty. Docket No.: 21708-04479 Sheet 5 of 11 not an expert The page is page point to at least k distinct non-affiliated hosts page have an out-degree greater than a Does this expert threshold, k? (see Fig. 11) Does this Z non-affiliated URLs discovered in the previous step point to pages that share the same broad The page is an expert page classification? Do all the k 312 Z 318 Next expert page

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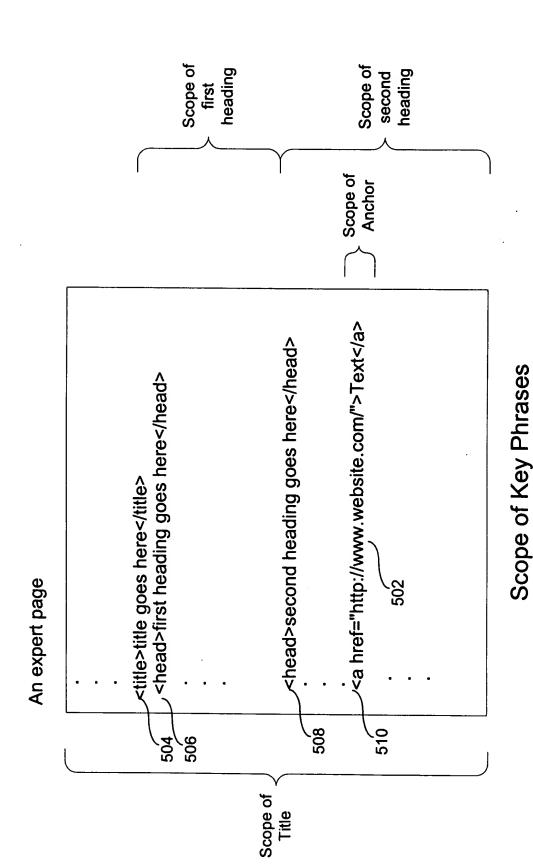
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Determining Expert Pages Fig. 3(b)

DOCUMENTS AND KEYBOARD SCOPE Inventors: Krishna A. Bharat et al. Atty. Docket No.: 21708-04479 Sheet 6 of 11 Identify the key phrases for the current expert page (for example, key phrases in titles, headings, anchors, etc.) Look at first key phrase of current expert page (v) Offset of the matched keyword within the key phrase. current key phrase qualify at least Start with first expert page one URL on the expert (iv) Key phrase type (title, heading or anchor) page? Does For each keyword in key phrase. Store: ii) Expert page ID iii) Key phrase ID Z (i) keyword 408 key phrases on this expert page Next key phrase More Adding Keywords to the Z Reverse Index Expert Fig. 4 expert pages Next expert page More 416

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(URLs in scope of a key phrase are "qualified" by the key phrase) Fig. 5

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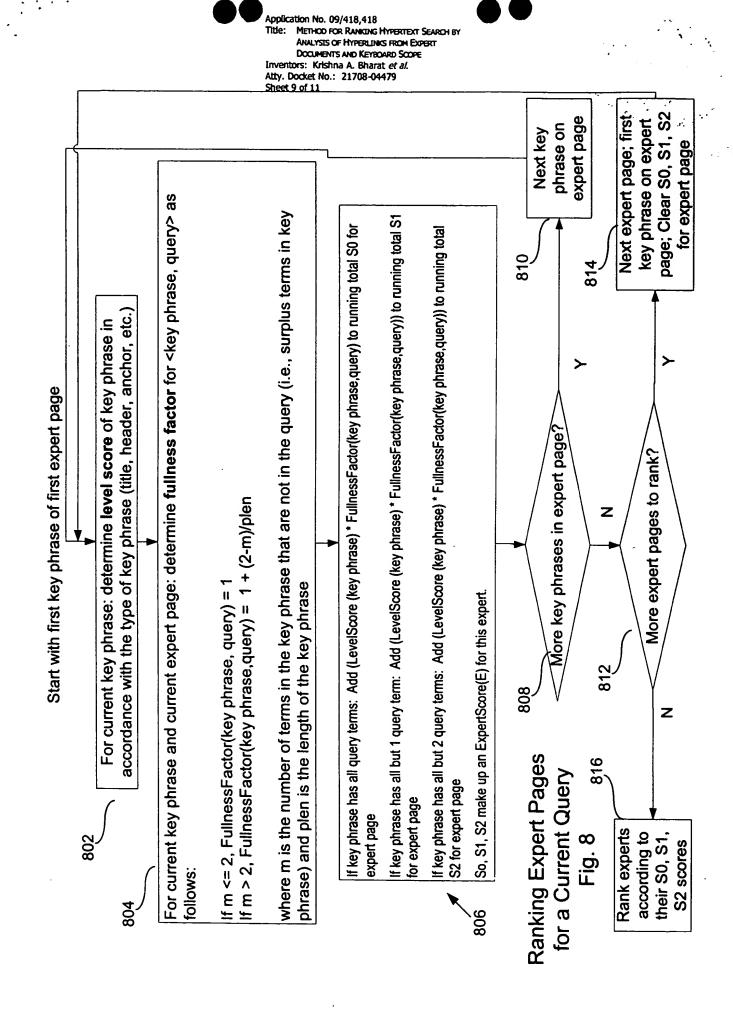
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				Offset of keyword within key phrase	:	
identifiers of key phrases that qualify URLs in expert page #1		Identifiers of key phrases that qualify URLs in expert page #P	URL Lists Fig. 6	Key phrase type	:	
Identifie URLs within expert page #1 qualify	:	URLs within expert page #P qualify	. n	Key phrase ID	:	
URLS V		URLS w		Expert page ID	•	
				keyword	:	

Global URL list

Example Expert Reverse Index Fig. 7

Σ



as 1. find #occurrences of each keyword in all key phrases of E For each target, TargetScore(T)=sum of the edge scores for Select target documents that are linked to by at least two 2. if the #occurrences for any keyword in E is 0: ES(E,T)=0 mutually non-affiliated selected expert pages, where the selected target also is not affiliated with the expert pages. Rank the list of targets by their TargetScore(T). This list is else ES(E,T)=ExpertScore(E) * sum of #occurrences for score ES(E,T) for the edge between the expert and target Select the N top-ranked expert pages for this query For each expert E that points to a target T, find the edge If two affiliated experts have edges to the same target, discard the edge that has a lower edge score ES(E,T) (from Fig. 8) all edges incident on the target the result of the query keywords = 904 910 912 Target Ranking Fig. 9

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